7 April 1965

MEMORANDUM FOR: Chief, Development Branch, P&DS

1X1 ATTENTION: [redacted]

1X1 SUBJECT: Evaluation of [redacted] Proposal #915908-B, 24 March 1965, "A Study and Experimental Investigation of Electrophotographic Techniques." Project #99820-5

1. This proposal is well-written; it indicates that the writer is fairly well acquainted with the technique he proposes to research. I feel that he is charging over ground already charged over by 1X1 [redacted] but there may be some minor emphasis I have missed.

2. I agree with the method of image assessment -- fidelity defect. This is currently being used by [redacted] at Technical Operations in evaluating coherent enlargers, and by [redacted] 25X 25X (SPPL) in a study of image quality following successive printings. It is reasonably easy to calculate for simple images, and generally follows subjective judgements of quality.

3. The writer has made several errors, not serious. On page II-9, he treats spatial frequencies, but in reality is talking of spatial details in the photograph. These are certainly related to spatial frequencies, but so is the gross detail. I think he might have difficulty using the same sentences if this change of meaning were forced upon him.

4. The reader is promised that this research program will result in blur-correction techniques. Nowhere is he treated to a discussion of how blur affects contrast and how the spread function of this blur will be corrected, changed, amended, or what have you. I felt like someone was dangling a carrot in front of me, and pulling it away each time I was ready to take a bite. I don't know whether or not this was deliberate, resulted from a lack of sufficient arguments or knowledge, or was a red-herring accidently dragged across the path. I certainly would suggest we ask them specifically to define how they propose to de-blur images. At least define what it is they mean by a blurred image.

5. I feel the proposal represents a program which could be adequately carried out by the proposed personnel. I also feel that a more detailed

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statement o the problem, with respect to blur correction, is needed. I further think they should discuss the [redacted] principle and how their proposed program differs from that technique. 25X

[redacted] 25X

Chief, Exploratory Development Laboratory Branch
P&DS

Attachment:
1 [redacted] Proposal #915908-B

SECRET (When Filled In)

NEW

R & D CATALOG FORM

DATE: 9 April 1965

1. PROJECT TITLE/CODE NAME: Spatial Frequency Analyzer Study

2. SHORT PROJECT DESCRIPTION: This study is to determine the feasibility and practicality of building a device to automatically analyze the spatial frequency content of recorded images.

X1

5. CLASS OF CONTRACTOR: Manufacturer

6. TYPE OF CONTRACT:

X1

7. FUNDS: FY 1965 ; FY 1966 ; FY 19 $

8. REQUISITION NO.:

9. BUDGET PROJECT NO.: NP-S-38

10. EFFECTIVE CONTRACT DATE (Begin - end): June 1965 - June 1966

11. SECURITY CLASS.: AA - Confidential; T - Unclassified; W - Unclassified

12. RESPONSIBLE DIRECTORATE/OFFICE/PROJECT OFFICER TELEPHONE EXTENSION

X1 DDI/NPIC/P&DS,

13. REQUIREMENT/AUTHORITY: Required as a tool to objectively analyze and compare the effectiveness of individual photographic systems of similar or dissimilar types and to isolate and identify sources of image degradation.

14. TYPE OF WORK TO BE DONE: Applied Research

15. CATEGORIES OF EFFORT

MAJOR CATEGORY	SUB-CATEGORIES
Special Techniques and Development Studies	Image Evaluation Spatial Frequency Microdensitometry

16. END ITEM OR SERVICES FROM THIS CONTRACT/IMPROVEMENT OVER CURRENT SYSTEM, EQUIPMENT, ETC.

Program will consist of a feasibility study and fabrication of a breadboard device. Monthly reports, a final report and a breadboard model will be furnished.

17. SUPPORTING OR RELATED CONTRACTS (Agency & Other)/COORDINATION

This contract would be related to more basic efforts made by this same group, as described under NP-S-37.

18. DESCRIPTION OF INTELLIGENCE REQUIREMENT AND DETAILED TECHNICAL DESCRIPTION OF PROJECT (Continue on additional page if required)

The objective evaluation of photographic systems has been a long standing requirement of everyone in the photographic field, but especially of NPIC. Because of our critical need for better photographic images, some measure of systems performance under operating conditions must be established. So far as this objective has eluded accomplishment. Reliance upon subjective operators and slow tedious techniques precluding adequate sampling have resulted in ambiguous evaluations of image quality and systems performance. The purpose of this study is to determine if photographic systems can be evaluated by analyzing ...

19. APPROVED BY AND DATE

OFFICE	DEPUTY DIRECTOR	DDCI

R & D Catalog Form continued...

18. the spatial frequencies contained in the photographic image through the use of a cathode ray tube scanner, a photo multiplier, an analyzer and display unit. The potential advantages of this development are speed; a completely automatic, objective readout; electronic reduction of data; and a simple, direct display. If the proposed study proves that image quality and system performance can be reliably and efficiently determined by this means an equipment development proposal will be solicited and considered for contract.

Approved For Release 2005/02/17 : CIA-RDP78B04770A000100100001-0

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TECHNICAL BACKGROUND PROCUREMENT INFORMATION

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I. Contractor
A. Name and address: [redacted]

25X1 [redacted]

B. Evaluation of previous performance: Very Good on Modulated Light Direct Film Viewer Feasibility Study.

II. Brief description of this procurement: This study is to determine the feasibility and practicality of building a device to automatically analyse the spatial frequency content of recorded images. Estimated total amt. [redacted] 25X1

A. Deliverable items: Intermediate and final reports with a possible deliverable breadboard and proposals for development of prototype equipment.

B. Is this procurement for other than a standard, "off the shelf" or slightly modified commercial item? Yes If "yes", is it anticipated that any more of this unit will be procured? N/A If so, a complete set of directly reproducible manufacturing drawings and specifications would normallybe included in this procurement. Comments:

This is a study and no hardware will be produced under this contract. A considerable amount of new equipment will be purchased for the Study of Techniques for Improving Image Perceptibility which will also be used in this study. Additional equipment will also be purchased. This will be government property.

C. Will contract cover a period of more than 90 days? Yes
If "yes", are progress reports desired? Yes If so, indicate frequency, content and number of copies desired:

Monthly reports are desired explaining what phases of the study were completed or worked on, what results were found and how these results were arrived at, and in which direction the study would continue.

D. Is any Government-owned property to be provided to the contractor?

No If so, list and indicate its availability (where, when, etc.)

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E. Is any special tooling involved? Yes

F. Security:

1. Association with the Sponsor is Confidential

2. The specifications and/or drawings are Unclassified

3. The item is Unclassified

4. Contractor personnel known to be aware of this proposed procurement:

25X1

5. Other security information Cleared channels exist

III. Reasons for selection of this source. If other sources were considered, indicate results. If no other sources were considered, list the reasons why this firm is considered to be uniquely qualified to perform this work.

25X1 [redacted] has already done much basic research in this area under previous contracts. Their proposal brings forth many new and imaginative ideas which are of a proprietary nature. It is our opinion that [redacted] is the best qualified source we can turn to for the study.

25X1

IV. If contract will cover deliverable item(s) state room location where equipment will be installed n/a. (It is extremely important that the Engineering Data Sheet including room location and any other pertinent facts be submitted to NPIC Engineering Section as far as possible in advance of delivery.)

V. Technical contact

[redacted] hone

25X1

In the event additional space is required, use the reverse side(s) of this form, with a reference to the item number to which the comment applies.

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P+PS

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NPIC PROJECT NO.

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CLASSIFICATION

RECEIPT OCB/OS

DISSEMINATED OCB/OS

SUPPORT/SERVICE REQUIREMENT

(The following info is required when rqmts are levied by external organizations)

OFFICE_____ DATE OF RQMT_____ CONTROL NO._____

NPIC DIV/DETACH PROCESSING RQMT_____ PROJ OFF_____ PHONE_____

SUPPORT REQUESTED OF_____ PRIORITY_____ DATE REQUIRED_____

(The following info is required when rqmts are levied for internal support)

DIV/STAFF P&DS DATE OF RQMT 19 Jan '65 CONTROL NO._____

SUPPORT REQUESTED OF P&DS PROJ OFF [redacted] 25X1

PRIORITY_____ DATE REQUIRED 31 January 1967

1. BACKGROUND INFORMATION:

The work requested is in support of a departmental: ☐ Photo interpretation proj.; ☐ Non-photo interpretation project. It will result in: ☐ Hard copy report; ☐ Informal report (memo); ☒ Basic service only.

Project Description: Photo Image Frequency Analyzer

2. SPECIFIC SUPPORT/SERVICE REQUESTED: Support from NPIC will probably consist of: ☐ Photographic; ☐ Reproduction; ☐ Mensuration; ☐ Graphics; ☐ ADP; ☐ Editing; ☒ Other (explain below) -- (Include statement as to estimated amount of work required of support component(s); i.e., number of contact prints, enlargements, boards, etc.)

Prepare design objectives for the design and fabrication of a prototype Photo Image Frequency Analyzer. Solicit and evaluate proposals.

Monitor contract

Test and evaluate. Write report. Demonstrate to interested parties.

3. URGENCY JUSTIFICATION: (If immediate support is required a statement of justification must be made on this form.)

DATE OF COMPLETION

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25X1 NPIC FM 218 (4-64)

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[redacted]

Contract [redacted]
Task Order No. 4
Supplemental Amendment No. 2

This Supplemental Amendment No. 2, effective as of this 22nd day of September 1966, by and between THE UNITED STATES OF AMERICA (hereinafter called "the Government"), represented by the Contracting Officer executing this agreement, and [redacted] (hereinafter called "the Contractor").

WITNESSETH:

WHEREAS, there exists between the parties hereto a Contract known and designated as Contract [redacted] (hereinafter called "the Contract"), and;

WHEREAS, both parties have agreed to a no cost termination of the Contract for the convenience of the Government.

NOW THEREFORE, the parties hereto agree as follows:

(1) That this contract is hereby cancelled in its entirety as of the date of this amendment.

(2) That the Government is subject to no obligation, claim, or demand of any kind thereunder.

THE UNITED STATES OF AMERICA

BY [redacted]

TITLE Contracting Officer

BY _____
duly authorized representative

[redacted]

BY _____

TITLE _____

NOTICE

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

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GROUP 1
Excluded from automatic downgrading and declassification